

**CONTENTS**

*Program Overview* .....1  
*Site Map*.....2  
*Questions and Answers* .....3  
*Alluvial Ground Water*.....4  
*Bedrock Ground Water* .....4  
*Surface-Water Sediments*.....5  
*Biosolids* .....6  
*Soils* .....7  
*Crops* .....7  
*Data* .....8  
*Definitions* .....12  
*Contacts*.....12

## Program Overview

Metro Wastewater Reclamation District (Metro District) applies biosolids to their properties near Deer Trail, Colorado. These biosolids applications could affect the quality of water in alluvial and bedrock aquifers, streambed sediments, soils, and crops. Water quality can be directly affected through:

- Contaminated recharge water, or
- Infiltration of water through contaminated soils or sediments (remobilization).

*Continued on page 3*

### USGS

*The U.S. Geological Survey is a science organization that provides the Nation with reliable, impartial information to describe and understand the Earth. The national USGS home page: <http://www.usgs.gov>*

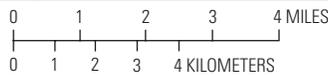
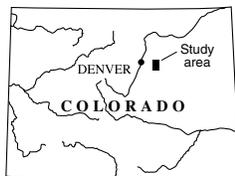
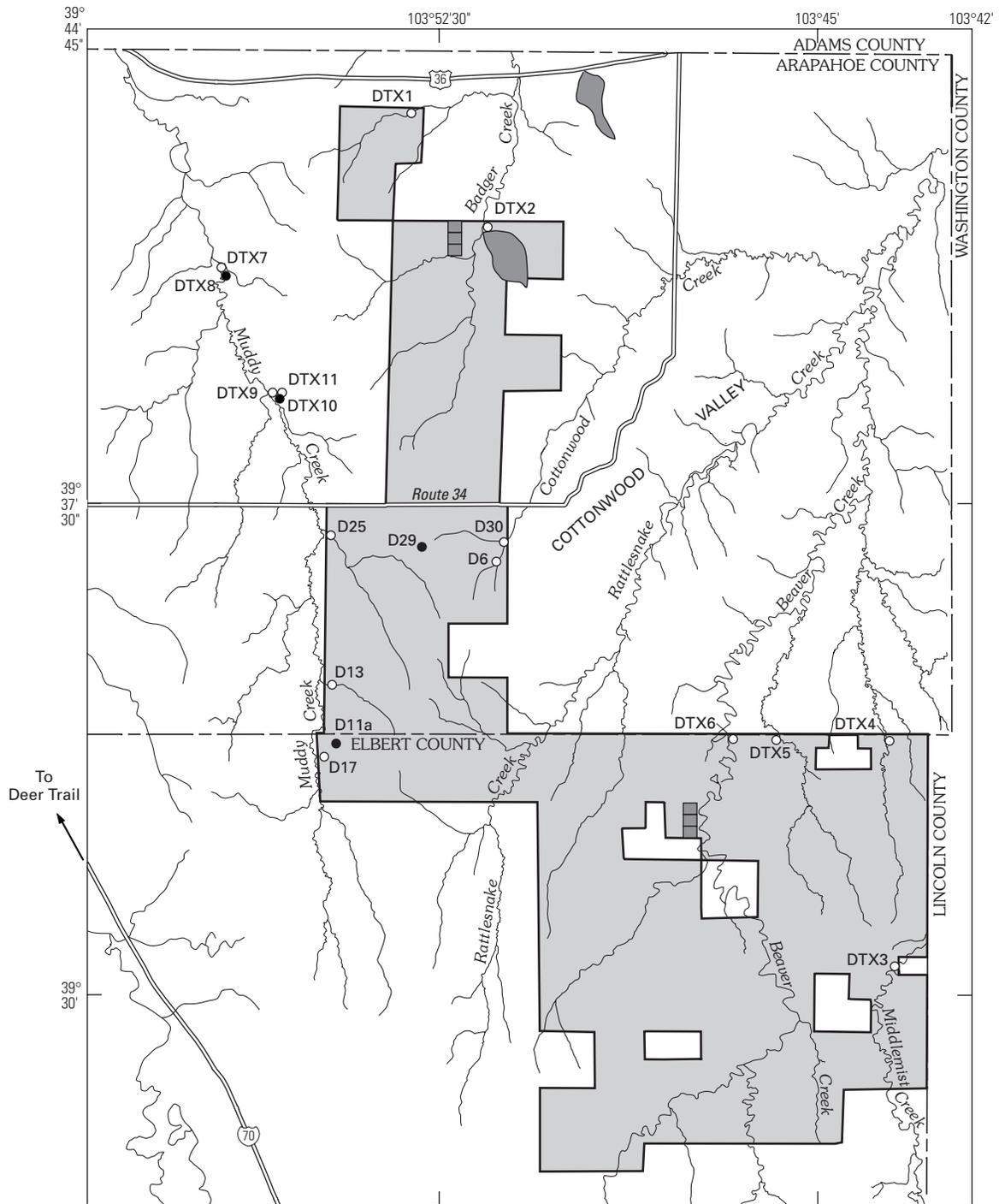
### *This USGS program:*

The Internet address for this program, including links for data and reports, is:  
<http://webserver.cr.usgs.gov/projects/CO406/CO406.html>

The Internet address for just the data is:  
<http://nwis-colo.cr.usgs.gov/>



**Precipitation is continuously recorded at 4 of the well sites: D25, DTX2, DTX5, and DTX11. These data are measured by a tipping-bucket style rain gage mounted on a post. The rain gages are partially dismantled each month and cleaned. Once each year, the calibration of these instruments is checked.**



EXPLANATION

- Metro Wastewater Reclamation District property
- Streambed-sediment sampling area
- DTX1○ USGS alluvial monitoring well
- D29● USGS bedrock monitoring well
- Soil-sampling area

**USGS Expanded Monitoring Program sites and Metro District's biosolids-application properties near Deer Trail, Colorado**

## Program Overview

*Continued from page 1*

Water quality can be indirectly affected through:

- Plowing that mobilizes or changes subsurface chemical constituents, or
- Contributions to natural processes such as nitrification.

Contaminated ground water or surface water could contaminate:

- Other aquifers, such as bedrock water-supply aquifers or alluvial aquifers,
- Other surface-water bodies (ponds or streams), or
- Streambed sediments.

Biosolids must meet metals and radioactivity regulations, or else agronomic loading rates will be incorrect and soils could be overloaded. Soil quality could either be improved by biosolids applications through increased nutrients and organic matter, or degraded through excessive nutrients or metals.

The U.S. Geological Survey (USGS) has designed and begun a new monitoring program to address concerns from a stakeholder group about the biosolids and the quality of the environment in the vicinity of the biosolids-application areas. The new USGS monitoring program near Deer Trail is referred to as the "USGS Expanded Monitoring Program" and began in January 1999.

This monitoring program is distinct from, but builds on, another USGS program that monitored shallow groundwater quality on the Metro District Central Farm from 1993-1998. The new program (1999-2005) considers environmental-quality issues for shallow and deep ground water, surface water (bed sediments), biosolids, soils, and crops. The new expanded monitoring program includes all three Metro District properties (North, Central, and South Farms) and related private-property locations. Both programs, however, use USGS and Metro District funds. In addition, the new monitoring program also uses funds from the North Kiowa Bijou Groundwater Management District. Both programs are designed, carried out, and interpreted independently by USGS, and quality-assured USGS data and reports will be released to the public and the Metro District at the same time. By definition and design, all USGS monitoring programs are independent and unbiased.

The objectives of the new Expanded Monitoring Program are to: (1) Evaluate the combined effects of biosolids applications, land use, and natural processes on alluvial aquifers, the bedrock aquifer, streambed sediments, soils, and crops by comparing chemical data to

- State or Federal regulatory limits,
- Data from a site where biosolids are not applied (a control site), or
- Earlier data from the same site (trends).

(2) Monitor biosolids for metals and radioactivity, and compare the concentrations with regulatory limits. (3) Determine the aquifer hydrology in this area.

The approach is unique for each component of the Expanded Monitoring Program. However, appropriate USGS methods and technologies will be applied to each component.

Quarterly reports such as this one will be distributed to the stakeholders and other concerned people, as well as available to the general public on the Internet (<http://co.water.usgs.gov>). Each quarterly report will summarize progress from the previous quarter and plans for the current quarter; chemical data will be included every other quarter. A USGS report will be prepared annually and made available after each year of the monitoring program: the reports will include data for that year, any interpretations for that year, and statistical analysis for the data to date. A comprehensive USGS report will be prepared and available after five years of monitoring that includes complete statistical analyses and interpretations. In addition, the USGS will meet with the stakeholders once a year to discuss the Expanded Monitoring Program results and to consider possible changes to the Expanded Monitoring Program.

## Questions & Answers

**Q:** What did the USGS mean by the question, "Are the Metro District biosolids affected by the Lowry Landfill Superfund site?" in the October-December 2000 issue of the Quarterly Report? Was the word *affected* intended to mean *contaminated*?

**A:** The USGS meant that biosolids that were trucked out to the Metro District site near Deer Trail during late November 2000 through mid-January 2001 were not likely to be derived from or in contact with the waste stream from the Lowry Landfill Superfund site because no water from Lowry was transferred to the Metro District during that time. Biosolids produced from the Metro District plant during July 2000 through October 2000 or after mid-January 2001 were derived from the waste stream that includes discharge from the Lowry Landfill Superfund site.

The word *affected* was not intended to mean *contaminated*. *Contaminated* means unfit for use because of the presence of undesirable compounds and is an interpretation of chemical data that the USGS does not make in these Quarterly Reports. The reader is encouraged to compare the data published in these Quarterly Reports to regulatory standards to see if contamination is present.

## Alluvial Ground Water

### Approach

Six monitoring wells were installed near the Metro District property boundaries in the major alluvial aquifers. These six wells plus five existing USGS monitoring wells will be sampled approximately quarterly for full inorganic chemistry and annually for radioactivity. Data will be reviewed and statistically tested for exceedance of regulatory limits and for trends.

### Progress Last Quarter (April–June 2001)

Ground-water levels were measured April 2, May 11, and June 6, 2001. Ground water was sampled for chemistry April 4–10, 2001. Ground-water data were compiled and reviewed. Another review of the annual report for 1999 was completed. The first review of the interpretive report for ground water 1993–99 (which includes data and interpretations for some sites included in the expanded monitoring program) was completed. Work continued on the second annual report (2000 data).

### Plans for the Current Quarter (July–September 2001)

Ground-water levels will be measured the first week of each month. Ground water will be sampled in early July, weather permitting. A draft of the second annual report (2000 data) will be completed. Changes suggested by review comments will be incorporated into the annual report for 1999, and this report will be submitted for USGS final approval. Changes suggested by review comments will be incorporated into the interpretive report for ground water

1993–99. A presentation will be made to stakeholders September 24, 2001.

## Bedrock Ground Water

### Approach

A structure map of the base of the bedrock aquifer was compiled and used to determine locations for two sets of new, paired wells (one alluvial well and one nearby dual-completion bedrock well comprise each pair). The well pairs were installed where both the Muddy Creek alluvial aquifer and the Laramie-Fox Hills aquifer are present (along the margin of the bedrock aquifer) near the Metro District properties. Water-level data from each well pair will be used to determine aquifer hydrology and interaction at those two locations. The two new bedrock wells

(DTX8, DTX10), along with an existing USGS bedrock well (D29), will be sampled approximately quarterly for full inorganic chemistry and annually for radioactivity. Data will be reviewed and statistically tested for exceedance of regulatory limits and for trends.

### Progress Last Quarter (April–June 2001)

Ground-water levels were measured April 2, May 11, and June 6, 2001. Ground water was sampled for chemistry April 4–10, 2001. Ground-water data were compiled and reviewed. Another review of the annual report for 1999 was completed. The first review of the interpretive report for ground water 1993–99 (which includes the structure maps made for the expanded monitoring program) was com-

*Continued on page 5*



***All the USGS equipment and samples related to this monitoring program are kept in locked buildings at the Denver Federal Center in Denver, Colorado. The Denver Federal Center is a restricted-access facility that has guarded entrances.***

## Bedrock Ground Water

*Continued from page 4*

pleted. Work continued on the second annual report (2000 data).

### Plans for the Current Quarter (July–September 2001)

Ground-water levels will be measured the first week of each month. Ground water will be sampled in early July, weather permitting. A draft of the second annual report (2000 data) will be completed. Changes suggested by review comments will be incorporated into the annual report for 1999, and this report will be submitted for USGS final approval. Changes suggested by review comments will be incorporated into the interpretive report for ground water 1993–99. A presentation will be made to stakeholders September 24, 2001.



***The USGS water and sediment samples are delivered in person to the laboratory to minimize delivery time and ensure safe delivery.***



***The USGS water and sediment samples are delivered to the USGS National Water Quality Laboratory at the Denver Federal Center. The laboratory is kept locked; even USGS employees must ring the bell to request access for delivering samples.***



***The USGS water and sediment samples are kept chilled in either coolers packed with ice or in electric refrigerators until analysis.***

## Surface-Water Sediments

### Approach

Surface-water contamination is a concern for the stakeholders, but

streams flow off the Metro District properties only during runoff when surface-water sampling is impractical. Therefore, possible surface-water contamination from metals will be evalu-

*Continued on page 6*

## Surface-Water Sediments

*Continued from page 5*

ated by sampling streambed sediments soon after storms. Two small drainage basins were selected for similar characteristics but different land use—one drainage in a biosolids-application field and another drainage in a farmed field (not on the Metro District properties) that does not receive biosolids. A downstream location in each of the two drainage basins will be sampled after the same storms, three to four times per year for inorganic constituents (including metals, total nitrogen, and total phosphorous) and organic carbon, and one time per year for radioactive constituents. Data will be reviewed and statistically tested to determine if concentrations are significantly different between the two drainage basins.

## Progress Last Quarter (April–June 2001)

The site was carefully monitored for runoff-producing rainfall. Despite some rainfall this quarter, runoff was not detected so no samples were collected. Another review of the annual report for 1999 was completed. Work continued on the second annual report (2000 data).

## Plans for Current Quarter (July–September 2001)

The site will be monitored for runoff-producing rainfall. Sampling may take place, depending on the weather. A draft of the second annual report (2000 data) will be completed. Changes suggested by review comments will be incorporated into the annual report for 1999, and this report will be submitted for USGS final approval.

## Biosolids

### Approach

Biosolids samples will be taken as a 24-hour composite from the Metro District plant and analyzed by USGS. Biosolids will be sampled and analyzed once each quarter during most of the program, and once each month for 6 months when the Lowry Landfill Superfund Site water transfer begins. Data will be reviewed and compared to Federal regulatory limits.

### Progress Last Quarter (April–June 2001)

The quarterly sample of biosolids was collected in June. The sample was a 24-hour composite from the conveyor belt at the Metro District facility. The material was placed in two acid-washed, one-gallon plastic bottles and

*Continued on page 7*



***The USGS continuous-recorder sites (D25, DTX2, DTX5, and DTX11) are enclosed in locked fences to minimize disturbance of the equipment by people and animals. If the equipment is disturbed, erroneous data or no data will be collected.***

## Biosolids

*Continued from page 6*

transported to the USGS in Denver. There, the sample was air-dried then ground to less than 150 micrometers. Chemical analyses were completed on all samples collected through April 2001.

### Plans for Current Quarter (July–September 2001)

A quarterly biosolids sample will be collected in September. A draft of the second annual report (2000 data) will be completed, and a presentation will be made to the stakeholders September 24, 2001.



**The USGS continuous-recorder sites include a plastic rain gage that is used as a check on the tipping-bucket rain-gage data. These rain gages are cleaned out at least once a month. Insects, bird waste, and other debris (such as the bird egg and nesting materials shown in the photo) need to be removed to have accurate readings.**

## Soils

### Approach

One site was selected for characterizing and monitoring the chemical composition of soil on the Metro District property in Arapahoe County, and one site was selected on the Metro District property in Elbert County. Each site consists of three 20-acre (933 feet by 933 feet) fields separated by 100-foot buffer zones. The center 20-acre field at each site will have biosolids applied after the initial soil sampling. The other two 20-acre fields at each site will not have biosolids applied and will be used as “control” fields to monitor the natural variability of soil composition for the duration of the study. All three 20-acre fields at each site will be farmed in the normal fashion and have crops planted and harvested. Soils from each of the six fields will be sampled before biosolids are applied to the two center fields and then again after each harvest. Samples will be analyzed for arsenic, cadmium, copper, lead, mercury, molybdenum, nickel, selenium, zinc, plutonium, and gross alpha and beta activity. Data will be examined after 5 years to determine if concentration has changed with time.

### Progress Last Quarter (April–June 2001)

Soil samples from the Arapahoe County site were collected June 11, 2001. The samples were dried in the USGS laboratories. Work continued on the draft second annual report (2000 data).

### Plans for Current Quarter (July–September 2001)

Soil samples will be prepared for analysis. A draft of the second annual report (2000 data) will be completed, and a presentation will be made to stakeholders September 24, 2001.

## Crops

### Approach

Crops from each of the six 20-acre soil-monitoring fields will be chemically analyzed after harvest. Analyses will include arsenic, cadmium, copper, lead, mercury, molybdenum, nickel, selenium, and zinc.

### Progress Last Quarter (April–June 2001)

Data were compiled and reviewed. Work continued on the draft second annual report (2000 data).

### Plans for Current Quarter (July–September 2001)

A draft of the second annual report (2000 data) will be completed, and a presentation will be made to the stakeholders September 24, 2001.

***If you have changes to the mailing list, please contact the Elbert County Environmental Health Officer (see page 12) or Tracy Yager (see page 12). Elbert County maintains the mailing list for these quarterly reports and for all meeting notices.***

***If you have questions about the Expanded Monitoring Program, please contact Tracy Yager (see page 12). Commonly asked questions will be included in each Quarterly Report.***

USGS ground-water data, January–June 2001

[Standards from Colorado Department of Public Health and Environment, 1997. Basic standards for ground water, SCCR 1002-41: July 14, 1997, 56 p. Data are preliminary and subject to revision. All data from filtered samples; analytical method for Mercury changed to atomic fluorescence cold vapor in April 2001; mg/L, milligrams per liter; µg/L, micrograms per liter; <, less than; E, value estimated by laboratory; M, presence of material verified but not quantified]

Well	Sample date	Time	Nitrate plus nitrite as nitrogen, mg/L	Arsenic, µg/L	Cadmium, µg/L	Chromium, µg/L	Copper, µg/L	Lead, µg/L	Mercury, µg/L	Molybdenum, µg/L	Nickel, µg/L	Selenium, µg/L	Zinc, µg/L
DTX3	01/04/01	1005	4.99	<2.0	<.037	<.8	4	<.080	<.2	1	<.060	17.5	3
DTX3	04/05/01	1020	4.79	<2.0	<.037	<.8	6	<.080	<.010	1	M	12.9	4
D17	01/03/01	1340	.648	E1.4	M	<.8	1	<.080	<.2	6	1	7.4	<.1
D17	04/06/01	1225	.603	E1.3	M	<.8	1	<.080	<.010	6	M	5.4	<.1
DTX4	01/04/01	1210	4.37	<2.0	M	<.8	8	M	<.2	1	2	4.6	5
DTX4	04/05/01	1200	1.18	<2.0	.1	1.9	12	M	<.010	1	5	<.2.4	9
DTX5	01/04/01	1430	<.037	<2.0	M	<.8	6	<.080	<.2	1	<.060	3.0	5
DTX5	04/05/01	1335	<.037	<2.0	M	2.0	11	M	<.010	1	2	<.2.4	7
DTX6	01/08/01	1040	.309	<2.0	<.037	3.4	10	<.080	<.2	1	4	3.3	8
DTX6	04/06/01	1020	.303	<2.0	<.037	<.8	16	<.080	<.010	1	<.036	E2.0	9
D13	01/09/01	1025	E.019	<2.0	M	<.8	3	<.080	<.2	1	<.060	<.2.4	2
D13	04/10/01	0945	<.037	<2.0	<.037	<.8	3	<.080	<.010	1	1	<.2.4	2
D29	01/03/01	1055	<.037	<2.0	<.037	<.8	9	<.080	<.2	1	4	3.2	6
D29	04/04/01	1135	<.037	<2.0	M	2.1	14	<.080	<.010	2	8	<.2.4	13
D6	01/08/01	1250	15.3	<4.0	.1	<.8	38	M	<.2	4	14	10.9	34
D6	04/04/01	1435	16.5	E3.1	.1	<1.6	57	M	<.010	4	11	15.3	42
D30	01/08/01	1510	<.037	<2.0	M	3.7	11	M	<.2	3	6	<.2.4	10
D30	04/04/01	1630	E.025	<2.0	M	1.8	18	M	<.010	3	4	<.2.4	13
D25	01/03/01	1530	4.05	3.2	.2	<.8	11	M	<.2	13	5	5.1	7
D25	04/10/01	1120	2.47	2.1	.2	<.8	11	M	<.010	10	<.060	E1.4	10
DTX10	01/09/01	1310	<.037	<2.0	<.037	<.8	6	<.080	<.2	1	M	<.2.4	5
DTX10	04/09/01	1315	<.037	<2.0	<.037	<.8	7	<.080	<.010	1	<.060	<.2.4	8
DTX8A	01/05/01	1445	<.037	<2.0	<.037	<.8	3	<.080	<.2	1	<.060	<.2.4	2
DTX8A	04/06/01	1420	<.037	<2.0	<.037	<.8	5	<.080	<.010	1	<.060	<.2.4	3
DTX2	01/05/01	1215	<.037	<2.0	M	2.5	8	M	<.2	2	2	E1.9	6
DTX2	04/09/01	1120	<.037	<2.0	<.037	<.8	9	<.080	<.010	1	<.060	<.2.4	10
DTX1	01/05/01	1000	1.20	E1.4	.1	2.0	9	M	<.2	6	5	<.2.4	6
DTX1	04/09/01	0945	1.19	E1.1	.1	<.8	9	M	<.010	6	4	E1.2	8
Human Health Standard			10	50	5	100	1,000	50	2	None	100	50	5,000
Agricultural Standard			100	100	10	100	200	100	10	None	200	20	2,000

**USGS biosolids data, June through November 2000**

[Data are preliminary and subject to revision. ppm, parts per million; pCi/g, picocuries per gram; +/-, plus or minus the analytical uncertainty]

Constituent or property	June 2000	August 2000	September 2000	October 2000	November 2000
Arsenic, ppm	1.8	2.0	2.0	1.8	1.8
Cadmium, ppm	2.8	2.7	2.9	2.9	5.4
Copper, ppm	560	580	560	570	570
Lead, ppm	66	78	75	120	70
Mercury, ppm	1.6	2.7	1.5	1.6	1.7
Molybdenum, ppm	26	31	33	31	23
Nickel, ppm	31	33	30	29	27
Selenium, ppm	11	12	11	12	11
Zinc, ppm	630	700	690	670	690
Gross Alpha radioactivity, pCi/g	44 +/- 11	36 +/- 12	45 +/- 12	43 +/- 11	44 +/- 11
Gross Beta radioactivity, pCi/g	23 +/- 6	27 +/- 5	29 +/- 5	29 +/- 5	25 +/- 4
Plutonium 238, pCi/g	.00 +/- 0.01	.02 +/- 0.03	.01 +/- 0.02	.00 +/- 0.01	-.01 +/- 0.01
Plutonium 239+240, pCi/g	.00 +/- 0.01	.00 +/- 0.01	.00 +/- 0.01	-.01 +/- 0.01	.00 +/- 0.01

**USGS biosolids data, December 2000 through April 2001**

[Data are preliminary and subject to revision. ppm, parts per million; pCi/g, picocuries per gram; +/-, plus or minus the analytical uncertainty; --, no data]

Constituent or property	December 2000	January 2001	February 2001	March 2001	April 2001
Arsenic, ppm	1.7	1.5	1.8	2.3	2.1
Cadmium, ppm	3.6	3.2	3.1	3.2	2.6
Copper, ppm	610	570	640	610	610
Lead, ppm	65	59	60	60	62
Mercury, ppm	1.6	1.4	1.4	1.6	1.4
Molybdenum, ppm	20	21	24	27	30
Nickel, ppm	28	24	31	29	30
Selenium, ppm	10	8.8	7.8	7.0	7.0
Zinc, ppm	700	640	740	690	670
Gross Alpha radioactivity, pCi/g	36 +/- 11	30 +/- 10	--	--	34 +/- 12
Gross Beta radioactivity, pCi/g	22 +/- 6	24 +/- 5	--	--	22 +/- 5
Plutonium 238, pCi/g	.01 +/- 0.02	-.01 +/- 0.01	--	--	.00 +/- 0.01
Plutonium 239+240, pCi/g	.00 +/- 0.01	.01 +/- 0.02	--	--	.00 +/- 0.01

**USGS trace-element data for whole wheat-plant samples collected September 2000, mg/kg**

[mg/kg, milligram per kilogram; &lt;, less than]

	Arapahoe County Site			Elbert County Site		
	North (Control) Field	Middle (Biosolids Application) Field	South (Control) Field	North (Control) Field	Middle (Biosolids Application) Field	South (Control) Field
Arsenic	.12	.15	.28	<.05	<.05	<.05
Cadmium	.05	.13	.14	.03	.03	.02
Copper	5.4	5.8	5.4	5.5	4.0	4.0
Lead	.17	.30	.37	.06	.04	.07
Mercury	.006	.005	.008	.006	.007	.006
Molybdenum	.86	.86	.79	1.71	1.06	1.08
Nickel	.94	1.20	1.25	.51	.45	.44
Selenium	.62	.44	.36	1.70	.40	.16
Zinc	17	15	15	21	15	16

**USGS trace-element data for wheat-grain samples collected September 2000, mg/kg**

[mg/kg, milligram per kilogram; &lt;, less than]

	Arapahoe County Site		Elbert County Site		
	South (Control) Field	Middle (Biosolids Application) Field	North (Control) Field	Middle (Biosolids Application) Field	South (Control) Field
Arsenic	<.05	<.05	<.05	<.05	<.05
Cadmium	.03	.04	.02	.02	.02
Copper	5.1	6.6	4.9	4.8	4.5
Lead	.01	.02	<.01	.01	<.01
Mercury	<.004	<.004	<.004	<.004	<.004
Molybdenum	.43	.80	.70	.51	.61
Nickel	.74	1.35	.43	.50	.50
Selenium	.41	1.4	2.1	.64	.38
Zinc	20	20	26	25	22

**USGS trace-element data for millet-grain samples collected September 2000, mg/kg**

[mg/kg, milligram per kilogram; <, less than]

	Arapahoe County Site		
	North (Control) Field	Middle (Biosolids Application) Field	South (Control) Field
Arsenic	.07	.04	.06
Cadmium	.05	.05	.06
Copper	7.0	7.1	7.4
Lead	.21	.02	.06
Mercury	<.004	<.004	<.004
Molybdenum	.73	.78	.65
Nickel	6.4	6.5	5.3
Selenium	.26	.24	.27
Zinc	22	19	21



***Frequent checking of the calibration and cleaning of the tipping-bucket type rain gages is necessary to collect accurate precipitation data. These instruments collect the precipitation data that is available on the Internet for 3 sites near Deer Trail (see page 1 for Internet address).***

## Definitions

*Analytical uncertainty*—The possible range of the true value or error term contributed by bias and variability of the laboratory measurement technique. All laboratory data have associated uncertainty. Each sample value should be thought of as a range in concentration defined by the reported value plus or minus the analytical uncertainty. The true concentration usually is somewhere in this range, but not a precisely known point. For most analyses, the analytical uncertainty is not calculated for each sample but is estimated from bias and variability data derived from analyses of quality-assurance samples like blanks and replicates. For radionuclide data, the analytical uncertainty is calculated individually for each sample for each analyte based on analytical and statistical variables.

*Biosolids*—Solid organic matter recovered from a sewage-treatment process that meets regulatory criteria for beneficial use, such as for fertilizer. Metro District applies Grade I, Class B biosolids at Deer Trail. Regulations require that land-applied biosolids must meet or exceed Grade II, Class B. Grade I exceeds Grade II.

*Less than (<)*—A designation for analytical results to indicate that a constituent was not present or was present at very low levels that the laboratory could not reliably determine. Note that the actual amount of this constituent in that sample is unknown and could be any amount between zero and the “less than” value.

*Picocurie (pCi)*—A unit of measurement of radioactivity. One curie is defined as the amount of a radionuclide in which the decay rate is 37 billion (37,000,000,000) disintegrations per second. One picocurie is one trillionth (1/1,000,000,000,000) of a curie.

*Radionuclide*—A radioactive atom characterized by a given number of neutrons and protons in its nucleus. For example, plutonium concentrations include plutonium-238 or plutonium-239, which are specific isotopes.

*Stakeholder*—Any person or group (including the Metro District) interested or concerned about the Expanded Monitoring Program.

## Contacts

USGS: Tracy Yager, 303-236-4882, ext. 225 (*email*: tjyager@usgs.gov)  
Dave Smith, 303-236-1849  
Jim Crock, 303-236-2452

Metro District: Duane Humble, 303-286-3267  
(*email*: DHumble@mwr.dst.co.us)

Elbert County Environmental Health Officer: 303-621-3144  
(*email*: elconurse@bewellnet.com)

State Biosolids Contact: Rick Koplitz, 303-692-3618

U.S. Environmental Protection Agency: Bob Brobst, 303-312-6129

***Third annual stakeholder  
meeting:  
September 24, 2001, at the Elbert  
County Courthouse in Kiowa***

*Prepared by* Tracy Yager, Dave Smith, and  
Jim Crock (USGS) in cooperation with  
Metro Wastewater Reclamation District,  
August 2001

Tracy Yager  
U.S. Geological Survey  
Box 25046, MS415, DFC  
Denver, CO 80225-0046